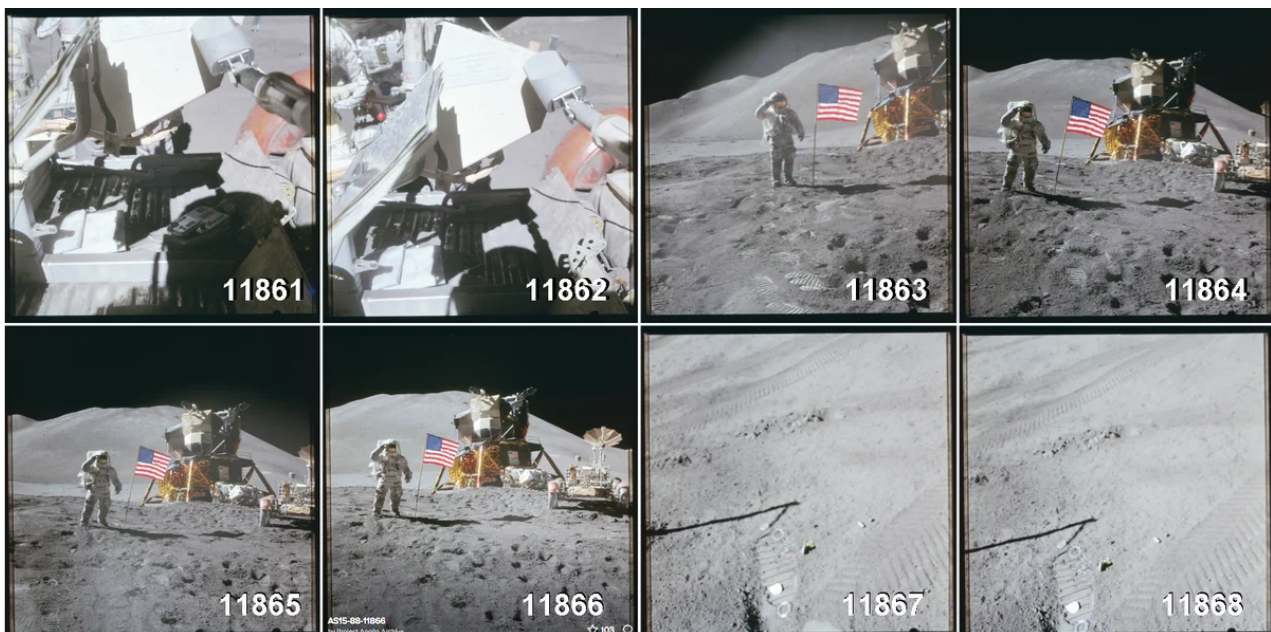


27. Неправда! Снимок "11861" из альбома "Аполлон-15" сделан на 4 минуты раньше снимка с флагом.

11-13 minutes

This is what one of the readers, Domrachev Leonid, wrote to me, when I wrote about 8 consecutive images from the Apollo 15 mission that the extreme images in this row, in contrast to the central ones, were taken in a different place and at a completely different time.

The article "[The most famous photograph from the Apollo 15 mission was taken in the pavilion by the front projection method](#)," I said that the 4 central images - the astronaut near the flag - are combined shots using front projection (the lunar mountain in the background is an image from a slide projector), and they were filmed from the same place and at the same time. But the shots on the left and right, taken in a different place and at a completely different time. This is what angered the reader. Here are these frames: 4 in the middle with a mountain in the background and 2 frames "before" and "after" these pictures.



Eight consecutive images from album # 88 of the Apollo 15 mission.

He wrote that from the moment the first image was taken, which is listed under the number 11861 (its full catalog number: as15-88-11861), it took only 4 minutes until the astronaut was taken at the flag (catalog number 11863). Apparently, my critic, Domrachev Leonid, carefully read the reports of NASA (Apollo Lunar Surface Journal), where, like in the Bible, all the lines are now numbered, all the frames are painted by the minute, thought that I was mistaken and that I needed to be corrected. Of course, I am familiar with the NASA reports. This is a fantasy novel about six landings on the moon, it has nothing to do with reality. This is something from the field of unscientific fiction. The NASA reports are commentaries on space-themed Hollywood movies with claims of some credibility. There is very little reliable information there. So, in these reports, the first landing on the moon dates back to 1969, and I know for sure that the footage of the so-called

"landing" and the first steps on the "Moon" were filmed at a film studio 2 years before that date, in early 1967. And only after the material was filmed, edited and dubbed, the premiere of the film entitled "The Flight of Apollo 11" was scheduled for July 1969.

Looking at a series of sequential shots in the Apollo 15 mission, I understand that it is impossible to shoot them with such a small interval of 4 minutes. In fact, a very long time passed between these frames (11861 and 11863), maybe a day, two or even a month. Why do I think so? Because the four central frames are combined frames, and the outer frames are "direct" shooting without the use of special effects. Combined shots require a special approach and take a very long time, so they can be trained for a month or two.

To make my idea clearer for you, I will analyze a small fragment from the film by Charlie Chaplin "The Gold Rush" (1925).

The house where Little Tramp (Charlie Chaplin) and Big Jim stayed, at night, during a snowstorm, was blown to the edge of the cliff. In the morning, Charlie Chaplin tries to open the door, but it is frozen. Little Tramp pushes the door with a running start and flies out, hanging on the doorknob over the abyss. Seeing that there is an abyss under him, Little Tramp throws his legs back into the house and is pulled inside.



Charlie Chaplin in The Gold Rush.

This dangerous trick of hovering over an abyss was performed by a doll. And so that the doll could raise its legs and climb back, strings were tied to the legs, for which the doll was pulled into the toy house.

You can watch the same fragment with music: [A fragment from the film "Gold Rush"](#)

In this episode, we see live footage (inside the house) and composite footage (outside). Removing such a trick in reality - hanging on a doorknob over an abyss in winter - is dangerous and technically difficult. Therefore, combined shots come to the rescue: instead of a real house, a small model is used, and Charlie Chaplin in the background is replaced with a doll.

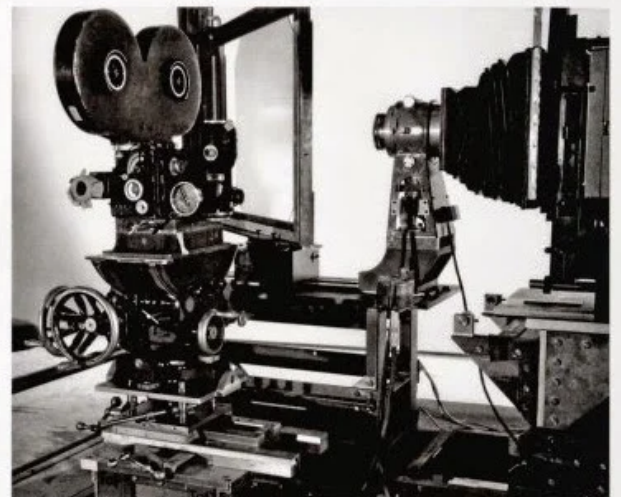
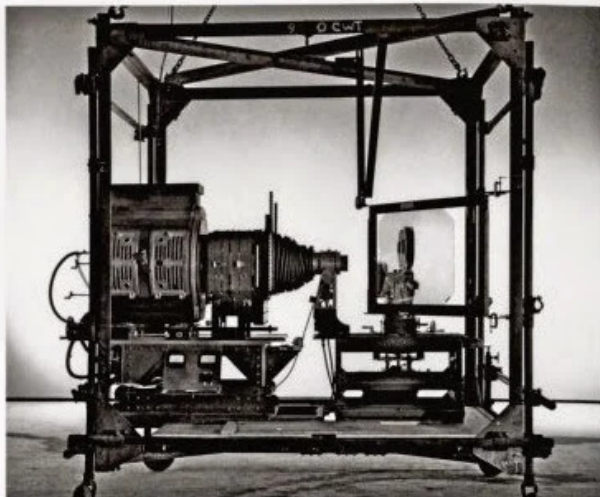
Now imagine that I will argue that less than 1 minute passed **between the filming of** these two **shots** , only a few seconds. Will you believe me? And for greater persuasiveness, I will put this time in the lower corner of the frame. At 9 am they woke up, and at 9 hours 32 minutes Little Tramp decided to open the door.



Two adjacent shots in an episode.

Even without understanding the technological features of filmmaking, you understand that the filming of these two shots has nothing to do with each other in time. They just **stand side by side in the installation** . And it's not a fact that at first the frame was shot inside the house, and then outside. In filmmaking, it could be the other way around. But it is unambiguously clear that the long shot (the whole house on the edge of the abyss) was filmed in a completely different way than shots from a closer distance (inside the house).

The same is the case with the footage from the Apollo 15 mission. The extreme shots (details of the rover and footprints in the sand at close range) were shot in one way, and the four central shots (the astronaut at the flag against the background of the mountain) were shot in another way. And we even know in what combined way these 4 frames were shot - by the front projection method. For front projection (as we already wrote in [the previous article](#)) requires that the camera, slide projector and translucent mirror are rigidly fixed relative to each other, and for this they are on the same platform.



Installation for front projection. On the left SIM card, the slide-projector is clearly visible, on the right picture the movie camera is better visible. In the middle there is a translucent mirror in the frame.

When we hear the word "projector", we usually imagine some kind of office video projector, which, during presentations, projects an image onto a 3-4 meter wide screen. But for front projection, where a 12 x 33.5 meter wide screen is used, a completely different projector is required, many times larger in size. It uses an electric arc burning between two coals as a light source (you saw such an arc when welding metal). Burning coal requires cooling (so that the projected slide does not melt), so pipes with a cold air blower are suitable for

the projector. And every 50-60 minutes the burnt coals must be changed. Here is such a difficult projector. Together with the filming camera, the weight of this installation turns out to be about a ton. What you see in the above picture (a clever design with frames) is "

This platform was on wheels, but it practically could not ride around the pavilion. If this camera set approached the astronaut, the distance from the projector to the cinema screen would change, and the projected mountain against the background would decrease due to the change in distance. It is clear that this should not happen - the distant mountain in the background should remain the same size, because, according to NASA's legend, this mountain is about 9 km away.

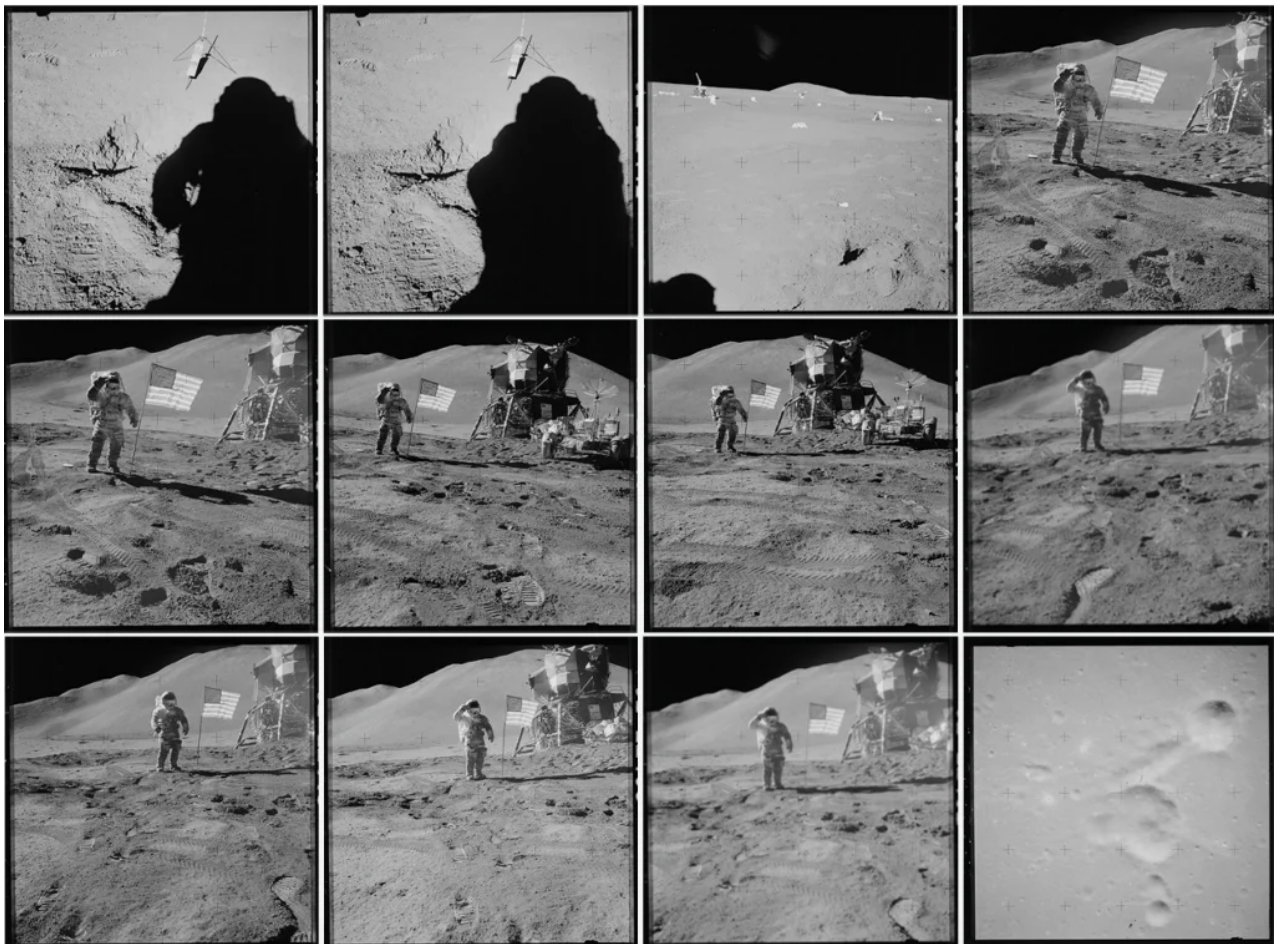
Thus, the shooting setup is practically immobilized, the maximum that the operator can do without disturbing the alignment of the camera and the projector is to pan slightly left and right by about 1/3 of the frame width, tilt the camera slightly up and down, or turn the camera slightly along the lens axis clockwise or counterclockwise to tilt the horizon line.

This is what we see in the Apollo 15 mission - four frames with a mountain, completely of the same type, which stand in isolation from other frames. Front projection is expensive, bulky and inactive. And it is very costly and capricious (either the slide will warp from the heat, then the heat filter will burst, then the color of the radiation will change, then the coals need to be changed). Therefore, we tried to shoot only key general shots with front projection.

And everything else (shadows in the sand, footprints, parts of the rover, etc.) was filmed with another camera mounted on the operator's crane. That is why I say that the extreme shots (before and after the series of pictures with the flag) were taken at a completely different time and, most likely, even with a different camera. And only **then, in the editing**, these shots were put side by side (there will be a separate article about this).

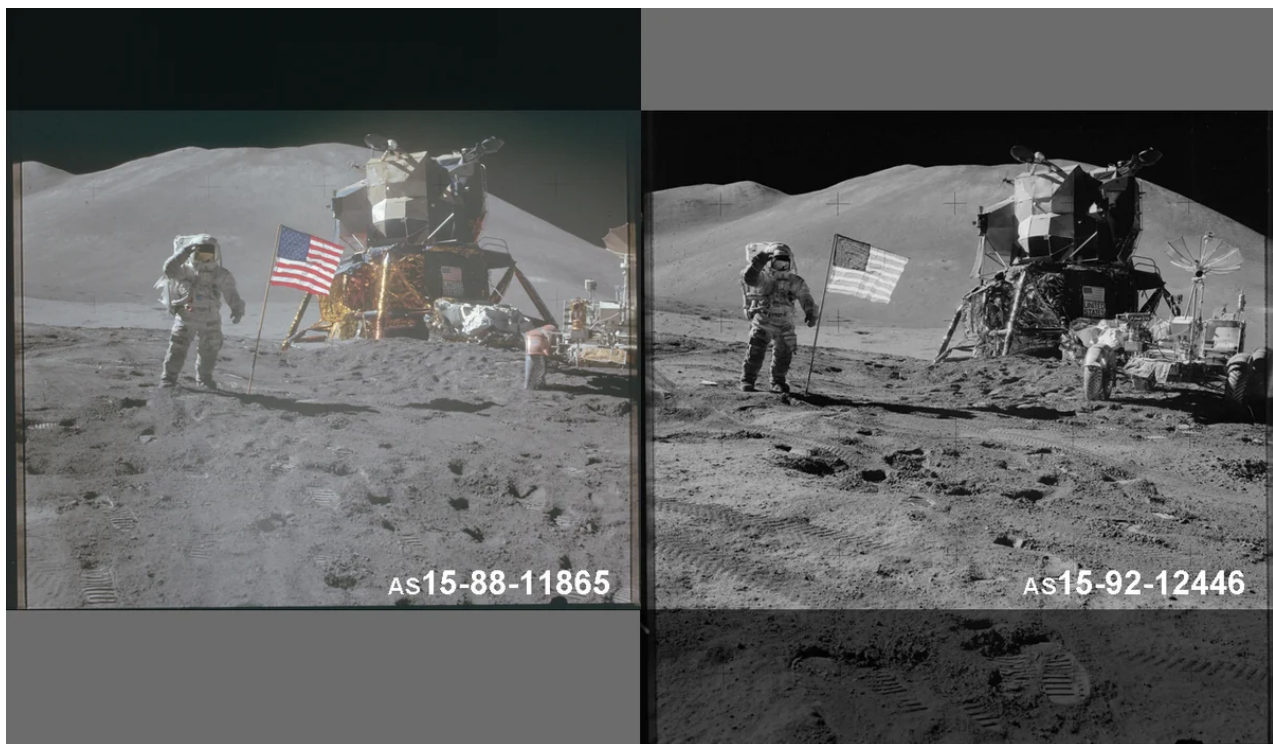
It took (on average) at least an hour to shoot one frame. A real person would not be able to stand still for so long, therefore, instead of living people, there were mannequins in the frame, the weight of which, as we already wrote, was about 28-30 kg. (See article "[How do you depict in a photograph that an astronaut on the moon is light?](#)")

Let us now take a closer look at other general plans with a flag from the same mission, which (as they wrote to me in the comments) I "delicately kept silent". Here are 12 shots taken at another time, among which we see an astronaut with a flag against the background of a mountain: "Apollo 15", album # 92.



"Apollo 15", album # 92, frames as15-92-12441 ... 12452.

These black and white flag frames are just twin brothers to the color frames, shot with the same front projection setup from the same distance. The left hand hangs completely identically with a protruding thumb and the right hand is equally raised, although, according to NASA's legend, they were removed with an interval of several hours. The left photo (album no. 88) was taken at 163h 59 min (time is counted from the moment the launch vehicle was launched), and the right photo (album no. 92) was taken 15 hours before it, at 148h 55 min. And for the whole day (by earthly standards) the mannequin practically did not budge.



The color photograph from Album # 88 and the black and white photograph from Album # 92 are similar to each other, although NASA reports they were taken 15 hours apart.

In the black-and-white album, we again see a series of the same type of frames of eight images, which differ little from each other. Again, we see a frozen mannequin, which in one frame for decency was slightly changed the position of one hand, and in the other frame the other hand was slightly moved. As for the direction of the "sunlight" light, it is still posterior-lateral, that on one day, that on the other.

Of course, they will write to me in the comments that the size of the astronaut in one of the frames is slightly different, which supposedly means that the photographer came closer. But I disagree and write an article in response ["Eight Pictures at the American Flag, or Attack of the Mushroom People . "](#)

As for the frames preceding this series (I mean the black-and-white series "an astronaut at the flag against the background of a mountain"), and the frames after this series, then they, these frames, are practically not connected with each other - neither in time nor in space. On the one hand, there are shadows in the sand, on the other hand, the view of the moon through a telescope. It's just a different way of shooting. In the middle there were combined shots taken by front projection, and before and after - "direct" shooting without special effects. And then in the editing, these photos were just put side by side.

★

Cameraman L. Konovalov was with you



Until next time!